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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,774	01/18/2001	Joseph M. Cannon	CANNON 115-104	5953

7590 07/18/2006

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EXAMINER
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TRAN, TUAN A

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/761,774	CANNON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tuan A. Tran	2682	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-14 and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Croft et al. (6,490,439) in view of Gendel et al. (6,127,936) and further in view of Daimon (6,168,515).

Regarding claims 16 and 23, Croft discloses an apparatus for optimizing link quality of a wireless piconet device to a user comprising: means for firstly determining a digital link quality of a digital wireless connection to a short range network when detecting a Bluetooth piconet by receiving/responding to a valid inquiry signal (establishing a present in a piconet network); and means for providing a first indication of the digital link quality to the user (See figs. 8-11 and Abstract, col. 8 line 5 to col. 10 line 12). However, Croft does not mention means for only providing an indication of an amount of quality achieved above an acceptable level necessary for a valid reception, wherein the acceptable level is determined by comparing the digital link quality and a minimum digital link quality threshold and the amount of quality achieved above the acceptable level is determined by an amount the digital link quality exceeds the minimum digital link quality threshold, and wherein the minimum digital link quality threshold is configurable by a user. Gendel teaches an apparatus for providing an

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indication of the magnitude of a quality comprising means for providing an indication of an amount of quality achieved above an acceptable level, wherein the acceptable level is determined by comparing the digital link quality and a minimum digital link quality threshold (minimum level for a valid reception, -95 dBm for example, as well as for activating the visual or audible indicator) and the amount of quality achieved above the acceptable level is determined by an amount the digital link quality exceeds the minimum digital link quality threshold (See fig. 1-3 and col. 4 line 54 to col. 7 line 4).

Since adaptive threshold, set by a user for a particular operation of an electronic device, is commonly used in the art as shown by Daimon (See figs. 6, 8 and col. 6 lines 49-58, col. 9 lines 23-54); therefore, it would have been obvious to one skilled in the art at the time the invention was made to apply the Daimon's suggestion of adaptive threshold in modifying the apparatus as disclosed by Croft with a reconfigurable minimum digital link quality threshold for the advantage of providing the user a higher degree of freedom in setting up operational parameters of the device. Further, since both Croft and Gendel teach about apparatuses that are capable of providing visual indication that conveys information to a user such as signal quality; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Gendel's teachings in modifying the apparatus as disclosed by Croft by configuring the apparatus to provide the indication of the amount of quality achieved above the acceptable level to the user for the advantage of indicating a best reception location to the users so they can take further actions.

Claims 7 and 14 are rejected for the same reasons as set forth in claims 16 and 23, as method.

Claims 1 and 4 are rejected for the same reasons as set forth in claims 16 and 23.

Regarding claim 17, Croft & Gendel disclose as cited in claim 16. Croft further discloses the apparatus varies visual indication according to the received signal strength (See fig. 11 and col. 9 line 61 to col. 10 line 3), and the received signal strength varies dependent upon locations of the receiving wireless piconet device; therefore the apparatus inherently comprises means for allowing the user to physically move the wireless piconet device; means for secondly determining the acceptable level of the at least one aspect of the digital link quality.

Claim 8 is rejected for the same reasons as set forth in claim 17, as method.

Regarding claims 18-19, Croft & Gendel disclose as cited in claim 16. Croft further discloses the apparatus comprises: a processor coupled to the transceiver, the processor adapted to vary the visual indication; and a memory unit coupled to the processor, the memory unit for storing instructions executed by the processor for varying the visual indication (See fig. 9 and col. 12 lines 28-35). Therefore the apparatus inherently comprises means for generating a Read\_RSSI command or a Get\_Link\_Quality command (command for measuring the signal strength) as well as means for retrieving a link quality value returned in response to the command.

Claims 9-10 are rejected for the same reasons as set forth in claims 18-19, as method.

Regarding claim 20-21, Croft further discloses the wireless connection is a piconet connection or a scatternet connection (See fig. 8).

Claims 11-12 are rejected for the same reasons as set forth in claims 20-21, as method.

Regarding claim 2, Croft & Gendel disclose as cited in claim 1. Croft further discloses the piconet front end conforms to Bluetooth standards. (See figs. 8-9 and col. 8 line 5 to col. 9 line 2).

Regarding claim 5, Croft further discloses the visible user link quality indicator comprises an LED (See col. 10 lines 4-12).

Regarding claim 22, Croft & Gendel disclose as cited in claim 16. Gendel further discloses the indication can be audible (See fig. 2 and col. 6 lines 7-15).

Claims 13 is rejected for the same reasons as set forth in claim 22, as method.

Claim 3 is rejected for the same reasons as set forth in claim 22.

Regarding claim 6, Croft & Gendel disclose as cited in claim 4. However, Croft & Gendel do not mention that the visible variable user link quality indicator comprises a graphical display. Graphical display is common in the art, therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use graphical display for the advantage of expanding the capability of the system to various types of display.

### ***Response to Arguments***

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Applicant's arguments with respect to claims 1-14 and 16-23 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Tran whose telephone number is (571) 272-7858. The examiner can normally be reached on Mon-Fri, 10:00AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tuan Tran



Matthew D. Anderson  
SPE - 2618